

ETCHANT COMPOSITION FOR SEM IMAGE ENHANCEMENT OF P-N JUNCTION CONTRAST

Abstract

An etchant composition for SEM image enhancement of P-N junction contrast. The composition comprises an NTC-1 solution mixed with an NTC-2 solution at a specific volumetric ratio. The NTC-1 solution is prepared by mixing solution "A" comprising organic acid, HF, and nitric acid with a 49% HF solution. The NTC-2 solution comprises metal ions and a strong oxidant. After the preparation of the NTC-1 and NTC-2 solutions, they are mixed together at specific volumetric ratio. Before carrying out an SEM analysis, the SEM specimen is dipped into the etchant composition.